Artificial Intelligence for Student Assessment: A Systematic Review

Year: 2021 | Citations: 302 | Authors: Víctor González-Calatayud, Paz Prendes-Espinosa, Rosabel Roig-Vila

Abstract

Artificial Intelligence (AI) is being implemented in more and more fields, including education. The main uses of AI in education are related to tutoring and assessment. This paper analyzes the use of AI for student assessment based on a systematic review. For this purpose, a search was carried out in two databases: Scopus and Web of Science. A total of 454 papers were found and, after analyzing them according to the PRISMA Statement, a total of 22 papers were selected. It is clear from the studies analyzed that, in most of them, the pedagogy underlying the educational action is not reflected. Similarly, formative evaluation seems to be the main use of AI. Another of the main functionalities of AI in assessment is for the automatic grading of students. Several studies analyze the differences between the use of AI and its non-use. We discuss the results and conclude the need for teacher training and further research to understand the possibilities of AI in educational assessment, mainly in other educational levels than higher education. Moreover, it is necessary to increase the wealth of research which focuses on educational aspects more than technical development around AI.